Stakeholder Meeting Notes

Sonoma Valley Stormwater Management-Groundwater Recharge Scoping Study

April 21, 2011 - Sonoma Community Center

Sponsored by the Basin Advisory Panel, Sonoma Valley Groundwater Management Program

INTRODUCTION AND MEETING OVERVIEW

This document provides a summary of the public meeting held on April 21, 2011 in conjunction with the quarterly meeting of the Basin Advisory Panel, Sonoma Valley Groundwater Management Program. The purpose of the public meeting was to present an overview and initial steps completed in an ongoing stormwater management-groundwater recharge scoping study being conducted by the Sonoma County Water Agency (SCWA) in the Sonoma Valley watershed. The SCWA is seeking stakeholder input on the approach and initial steps conducted for the scoping study.

Presentations and discussions were provided by several members of the SCWA project team:

- Kent Gylfe, SCWA project manager
- Betty Andrews, ESA PWA, Technical Consultant to SCWA
- Tim Parker, Parker Groundwater, Technical Consultant to SCWA
- Jenny Sterling, Daniel B Stephens & Associates, Technical Consultant to SCWA

Scoping Study Overview - Kent Gylfe, SCWA

There are three stormwater management/groundwater recharge scoping studies underway in Sonoma County; one in the Sonoma Valley and the other two are in Petaluma Valley and the Santa Rosa Plain (Laguna-Mark West), respectfully. This is the first stakeholder meeting in the early stages of a scoping study on stormwater management and groundwater recharge in the Sonoma Valley. A "scoping study" typically precedes a feasibility study. This scoping study is designed to identify project concepts for further development as future tangible projects to help address stormwater management and enhance groundwater recharge. There will be an additional stakeholder meeting once project concepts have been developed to present them to the public and solicit stakeholder input.

The Core Project Objectives for the scoping study are:

- Flood hazard reduction
- Groundwater recharge

For any possible project to be considered, it will be required to achieve the core project objectives. Additionally, selected projects will be:

- Multi beneficial and have multiple partners
- Designed to be eligible for grant funds

Issues and Objectives Presentation - Betty Andrews, ESA PWA

Key issue areas were identified as part of a Draft Issues Assessment, specifically:

- Flood hazards including
- Large floods: reported economic damages have been centered on Kenwood, City of Sonoma and Schellville; dispersed flood impacts also occur, even from smaller events
- Associated factors such as sediment deposition, undersized infrastructure, and bay tide levels combined with low gradient and sediment deposition
- Groundwater recharge to address
 - Localized areas of declining groundwater levels

 Potential increasing salinity in groundwater from the south end of the Sonoma Valley

Identification of these key issues resulted in the development of the project core objectives of flood hazard reduction and groundwater recharge.

Supporting project objectives that have been developed for the scoping study include:

- Water quality improvement
- Water supply improve availability, reliability and flexibility
- System sustainability including energy and water efficiency and climate change resiliency
- Ecosystem improvement
- Agricultural land preservation
- Open space preservation
- Community benefits enhancement and creation

The project identified by this scoping study could be a single element or a collection of multiple elements that may be quite different in nature and location. In addition to the required core project objectives, supporting objectives have been identified and for stakeholder review. Ideally, the selected project will accomplish the core objectives as well as all the supporting objectives, though the selected project may not accomplish all of the supporting objectives. The project objectives, both core and supporting, will be used to help the project team develop project concepts. At a later stage in the study, screening criteria would be developed and applied to identify projects that would be considered, and these would be prioritized to identify the recommended project for further development.

Meeting participants were invited to review the Draft Issues Assessment and Draft Project Objectives Framework documents, provided as handouts, for further comment. Comments should be sent to ESA PWA at bandrews@esassoc.com, as noted on the meeting agenda. Comments will be accepted through May 6, 2011.

Questions posed for discussion later in the meeting included:

- Does this presentation fairly sum up your sense of the flood and groundwater issues for the Sonoma Valley?
- Is there any subset of these issues that you would like to see this project focus on?
- Did we pick the right supporting objectives?
- How important is each supporting objective?
- Are some supporting objectives more important to you than others?

Project Elements Presentation – Jenny Sterling, Daniel B. Stephens & Associates

An overview was provided of a variety project element types and concepts to address flood management, groundwater recharge, and combination project concepts that would tackle both of these core objectives as well as various supporting objectives. Several examples were shown of each, including some local existing projects.

Flood hazard reduction methods may include

- Reduction of peak flows with detention (temporary storage)
- Reduction of flood volume with retention (long-term storage)
- Direction of flood waters to flood-compatible zones such as

- Bypass or designated floodway or overflow area
- Increased stream corridor conveyance
- Elevation or relocation
- Flood warning system improvements

Groundwater recharge project elements may include:

- Implement or facilitate dispersed surface water detention
 - LID measures
 - Rainwater harvesting systems
- Develop centralized surface water detention/retention
 - Off-channel reservoir
- Implement or facilitate dispersed passive groundwater infiltration
- LID measures
- Develop centralized passive groundwater infiltration
- Infiltration gallery
- Siphon
- Creek daylighting

Several questions were posed for discussion later in the meeting:

- Are there some kinds of projects that you prefer more than others? What project characteristics are important to you?
- Are there suitable projects that you are already planning or developing?
- Are there specific projects that you think should be developed?

Work Group Discussions – Project Issues and Objectives

The public attending the meeting broke up into 4 smaller groups for 20 minutes of discussion on the draft project issues and objectives, using the previously presented questions as a guide. Each group included a member of the project team to help with the discussion and each group recorded and reported their major outcomes.

Reporting of Work Groups

Results of the work group discussions are included below.

Group 1

Group 1 elected to prioritize the supporting objectives, with 1 being highest priority.

- 1. Water Quality equal to Water Supply
- 2. Agricultural Land
- 3. Ecosystem
- 4. Open Space
- 5. Community Benefits

Group 1 felt there was a lot of overlap between objectives. They were also critical of the definition of Sustainability, with the following comments:

- The last sentence of the definition should really be part of ecosystem.
- The definition needs some improvements.
- The focus should be on healthy waterways.
- Maybe "sustainability" could change to Water Quality/Sustainability and add health of

waterways to definition.

Group 1 would like to make sure that the emphasis on increasing water supply is consistent with community character and does not translate to supporting growth. In terms of the priority of the core objectives, Group 1 felt that flood mitigation is more important than groundwater recharge and that this would be consistent with a relatively high priority for Agricultural Land preservation.

Group 2

Group 2 had no objections to the supporting objectives as they are.

Group 2 made the following observations in their reporting:

- Increasing groundwater supply could be important as a nexus for funding opportunities from local water purveyors (e.g., the City of Sonoma and VOMWD).
- There is an interest in first quantifying the impacts of smaller, more dispersed projects in the short term, and subsequently evaluating stormwater and groundwater recharge.
- Can the impacts of these smaller scale/dispersed projects be modeled (simulated) to see what the effects are?
- There are lots of shovel-ready opportunities both small and large.

Group 3

Group 3 expressed the following opinions in their reporting:

- Flood issues should include Glen Ellen and Kenwood.
- Groundwater focus should be on areas where groundwater depressions exist.
- It's good to support wetlands and important to have a positive impact on salt water intrusion.
- Group 3 struggled with the current definition of the Agriculture supporting objective, and some questioned the use of it as an objective. It may help to further qualify the objective, perhaps as sustainable agriculture.

Group 4

Group 4 made the following observations in their reporting:

- Think about how to focus on projects that will give benefits soon.
- The water supply supporting objective should include water supply for fire.
- Effective project formulation will include smaller projects. These smaller projects can be implemented sooner, for a lower cost, and it will be easier to find willing landowners and projects participants.
- In the low lands, there is concern about being cautious about breaching levees.
- Reducing erosion should be a supporting objective.
- Projects need community support.
- There is interest in support for individual financing of projects.
- Focus should be in the hills where there is more precipitation.
- Avoid land acquisition.
- There are several areas where sediment transport and erosion are issues.

Project Elements Discussion

The four small groups reconvened into one large group to discuss the project elements, and also possible project concepts that stakeholders may be implementing, planning, or have ideas about.

Some project ideas had come up in the earlier small group discussion (Group 4 and Group 2):

- Ground roughening on suitable tracts of land, drill small 4-6" deep holes to act as miniature water collection reservoirs.
- Dams on feeder streams or ditches to slow water delivery.
- Address conveyance block at confluence of Sonoma and Carriger Creeks.
- Use of vineyard ponds for recharge?

Ideas for small projects raised by participants:

- Third Street linear swale detention, rain garden and recharge basin.
- Creek stabilization use an excavator to stabilize with concrete barriers and use a check dam to raise up the creek level.
- Oakmont create a backyard swale and fill with rock. To help with recharge and provides surge protection. This needs more study in order to get to site-specific information. Concern: potential effects to downslope development.
- Rainwater harvesting, stormwater storage, retention, detention, cleansing
 - o Part of an existing EPA grant for SEC, RCD, Marin Public Works
 - o Schellville, Glen Ellen
 - o Excavate a hole, line it and fill with rock, biofilter with sand and soil. Pump the filtered water to a storage tank and can use for irrigation.
 - o \$100,000,4 months needed for this project
 - o There are water rights issues when you affect runoff to a stream
 - o Has potential to filter 2 million gallons
- Engle Park on 5th Street East
- Gravel Quarry on Calabasas Creek
- Ernie Smith Park Regional Parks property which contains an existing constructed wetland that would require some sediment management to function as stormwater retention/recharge project.
- High School ball fields
- SEC's Kenwood project by Hwy 12

Interested in being able to quantify the comparison between large versus small projects. This is a challenge with small projects.

Are all projects physical? Some examples of non-physical projects that have been discussed include:

- Low-Impact Development (LID) Manual (done)
- Incentives
- Streamline permitting
- Technical advice for implementation

CUDO Cubes – could be used for storage under soccer fields for irrigation use

The Vallejo State Park is location of interest for a recharge project.

- There is room.
- The City of Sonoma wells are being moved nearby.
- There is high recharge potential and plenty of storm water coming off the mountain.
- There are also tanks nearby leads to low energy use, low cost, sustainable
- Potential idea is an infiltration gallery that could provide biofiltration all underground
- Could still have the fireworks there
- Sustainable

SEC has information on which streams have the most runoff.

Question: Slow it, spread it – would be nice to know quantifiable impact and riparian impact – available? Research is just starting to produce some empirical data on in-the-ground LID system effectiveness.

Replace culverts discharging to stream with system to release flow to riparian corridor, to obtain biofiltration plus recharge.

Questions about project screening – What is the process? How will projects be screened? The project screening process is not yet fully defined.

Question: When will the benefits assessment be done? – for the scoping study, it will be qualitative.

Wrap-Up

The plan for the next steps of the scoping study includes the following:

- Written comments will be accepted on the Draft Issues Assessment and Draft Project Objectives Framework through Friday, May 6, 2011.
- Written comments were directed to Betty Andrews via email bandrews@esassoc.com.
- The scoping study documents, including presentations at the meeting, and project contacts are available on the project website at http://www.scwa.ca.gov/groundwater-recharge/
- In the next steps of the scoping study, initial project concepts will be developed and subjected to draft screening and prioritization.
- Another stakeholder meeting will be held in early fall 2011 to review results and get input for selection of the recommended project.
- A project implementation strategy will be developed and required additional studies described.

Attached: sign-in sheets



Sign-in Sheet | Thursday, April 21, 2011 3:00–5:00 Stormwater Management-Groundwater Recharge Scoping Study

Location: Sonoma Community Center, Room 200, 276 E. Napa Street, Sonoma

Education: Soliona Community Center, Room 200, 276 E. Napa Street, Soliona		
Name JoHN ROB	Affiliation MHANYE	Email WATERRETS @AOL; ed
Mark Bramfit		Mark@markbransitt.com
JONNY STEPLI	-	VENSTERLING DBSTEPHEN
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Suran Haylon	Seles	Susan haylonesered, org
Ding Chel	is lel6	ghazvelis agmail com
Dave Ruha	endson Rmc dric	hardsine incluster com
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Sign-in Sheet | Thursday, April 21, 2011 2:00-5:00 Basin Advisory Panel

Name Affiliation Email

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Dance Green Company Company Someone

ALL WEST CONSTRUCTION Open Space District

Written Comments

Written comments were received after the meeting from the following individuals and entities:

- 1. Rochelle Campana
- 2. Kathy Pons
- 3. Dino Bonos
- 4. Sonoma Ecology Center

Comments were specifically solicited on the Draft Issues Assessment, Project Objectives Framework, and specific project concepts. Input was received on a wide range of topics, all of it useful to shaping the approach to developing the project in this and future phases of work. Copies of written comments received are provided in the following pages.

From: rochelle campana
To: Betty Andrews

 Cc:
 Kathy Pons; Tim Parker; Marcus Trotta

 Subject:
 comments on last thursday"s scoping session

Date: Tuesday, April 26, 2011 9:29:07 AM

Hi Betty,

thank you for the great presentation. I liked the Core Project Objectives very much and think they are fine as they are, but I do have a few suggestions for revising the Supporting Project Objectives:

Water Quality

- Improve Water Quality of both surface and groundwater supplies.

Water Supply

- Increase or improve water supply availability, reliability and flexibility for domestic, municipal, industrial and environmental uses, as long as those increases do not encourage increased development or population growth within the valley.

System Sustainability (I think this could use a new title, but i'm not sure what it would be - energy independence?

Ecosystem (I would change this to Watershed Enhancement)

- Improve Ecosystem function and/or enhance habitat especially along the riparian corridor.

Agricultural Land

- Preserve existing Agricultural Land uses

Note: I realize that agricultural land will play a key role in the flood control/groundwater recharge effort, but I hope that it will not be at the expense of other supporting objectives, i.e., inefficient pesticides and fertilizer applications pose a threat to both habitat surface water quality.

Is there a way we can encourage water conservation methods such as dry farming, and alternative methods for frost control?

Community Benefits - this heading needs to be replaced by something more specific, as the term will mean different things to different people, As the recent controversy over a "Staples" in Sonoma showed, a big box store in town would be perceived as a "benefit" to some, while definitely not to others.

what about Community Outreach/Education? that doesn't cover the recreation part of that , maybe that could go in with the open space?

i hope this was helpful. and thanks again for including us.

Rochelle Campana

From: kpons282@aol.com

To: Betty Andrews; sharonski@comcast.net
Cc: Marcus.Trotta@scwa.ca.gov; tim@pg-tim.com
Subject: Re: comments on last thursday"s scoping session

Date: Thursday, April 28, 2011 1:30:22 PM

One other factor I thought of that could effect flooding and recharge is the tiles that are put under fields that drain the land. I believe that there might be quite a few in the lower Sonoma Valley, the Carnaros area. It creates more run off and doesn't allow for groundwater recharge... Something to consider?

Kathy

-----Original Message-----

From: Betty Andrews <bAndrews@esassoc.com>
To: rochelle campana <sharonski@comcast.net>

Cc: Kathy Pons <KPONS282@aol.com>; Marcus Trotta <Marcus.Trotta@scwa.ca.gov>; Tim Parker

<tim@pg-tim.com>

Sent: Wed, Apr 27, 2011 11:45 am

Subject: RE: comments on last thursday's scoping session

Thank you for your thoughtful comments, Rochelle!

Elizabeth (Betty) Andrews, PE Principal Engineer ESA PWA | Environmental Hydrology Main office: 1425 North McDowell Blvd., Suite 200

Petaluma, CA 94954

707.795.0900 main | 707.795.0902 fax

707.285.0581 direct | 707.206.7207 mobile

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Sacramento office:

2600 Capitol Avenue, Suite 200 Sacramento, CA 95816

916.564.4500 main | 916.544.4501 fax

707.206.7207 mobile

Please note my new home base and e-mail address!

From: Tim Parker [mailto:tim@pg-tim.com] **Sent:** Tuesday, April 26, 2011 6:00 PM

To: rochelle campana

Cc: Betty Andrews; Kathy Pons; Marcus Trotta

Subject: Re: comments on last thursday's scoping session

Thanks Rochelle -

On Apr 26, 2011, at 9:29 AM, rochelle campana wrote:

Hi Betty,

thank you for the great presentation. I liked the Core Project Objectives very much and think they are fine as they are, but I do have a few suggestions for revising the Supporting Project Objectives:

Water Quality

From: <u>Dino Bonos</u>
To: <u>Betty Andrews</u>

Subject: Sonoma Valley Stormwater Management and Groundwater Recharge Study - Comments

Date: Friday, May 06, 2011 1:35:22 PM

Dear Ms. Andrews,

It is exciting to hear about your work on Sonoma Valley Stormwater Management and Groundwater Recharge Study. I understand a similar study is planned for the Laguna and Santa Rosa Creek basin. When do you expect this study to get underway?

In the Sonoma Valley as well as elsewhere in this county, I see opportunities for private and public sector cooperation in addressing the issues of stormwater management and groundwater recharge. Agricultural and natural resource experts have developed innovative methodologies to mitigate chronic groundwater over drafting and the best practices for using storm water to benefit farming operations. Capturing storm water is a great way for our farmers to decrease flooding risks, prevent subsidence and replenish groundwater aquifers, and grow crops in a lowinput, low-maintenance way.

Also, the Water Agency has a tremendous opportunity to convene a coalition of local stake holders (Sonoma County Open Space District; Regional Parks; State Department of Fish and Game, U.S. Fish and Wildlife and non-profits) to develop a centralized groundwater recharge site(s) to off-set urban development runoff impacts and mitigate past flood control practices.

Conceptually, a Sonoma Valley Groundwater Recharge and Reuse site would create a destination for wildlife watching; protection and enhancement of scarce riparian areas and wildlife habitat; environmental education and other outdoor recreational activities while recharging a valuable resource. Potentially, a collaborative effort would establish a model educational site for sustainable use of water resources, habitat conservation and restoration while meeting all local, State and Federal statutes.

Thank you for the opportunity to comment on your valuable project. Let me know how I can further my participation in this effort.

Regards,

Dino Bonos **Bonos Land Planning** *Planning & Real Estate Services*707-526-1123 (o)

707-479-3716 (cell)

707-526-6332 (fax)

From: Richard Dale
To: Betty Andrews

Cc: <u>Caitlin Cornwall; Becca Lawton; Deanne DiPietro</u>

Subject: Comments-- SV stormwater management groundwater recharge scoping study

Date:Friday, May 06, 2011 5:06:51 PMAttachments:20110505SECcomments signed.doc

ATT564898.htm

Betty,

Please find our comments on the SV study attached.

Have a great weekend,

Richard



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Betty Andrews ESA PWA | Environmental Hydrology 1425 North McDowell Blvd., Suite 200 Petaluma, CA 94954

May 5, 2011

Dear Betty,

Please accept our comments on the Sonoma Valley Stormwater Management and Groundwater Recharge Scoping Study Draft Issues Assessment and Draft Project Objectives Framework. This is an exciting project, one that has the potential to set the direction for water and watershed activities and funding in our valley for many years.

Input on draft issues assessment and draft project objectives framework

- 1. CalTrans is actively planning for the future of Highway 37. Some of those plans may involve increased traffic on Highway 121, which would affect constraints and opportunities in the Schellville area. The Sonoma Ecology Center is on the project team with CalTrans to test new methods for evaluating future scenarios; we believe that effort should be integrated into Scoping Study thinking.
- 2. Cost-benefit analysis for ranking projects should extend over at least 30 years and include infrastructure costs and benefits to both the private and public sectors. For example, if a project reduces flood hazard in one area but causes long-term increases in stream velocity and sediment erosion downstream or makes it necessary for other area landowners to drill their wells deeper in 20 years, those incurred costs should be included in the cost-benefit analysis.
- 3. The project development process should determine early on before the feasibility phase whether and where there are any politically feasible locations for "centralized" (meaning big) facilities, with willing sellers. Prescribing these types of facilities after we are sure they are geographically possible will save time and money.
- 4. Start from the beginning before the feasibility phase to estimate and model the contributions and costs of both soft-path, dispersed projects and hard-path, centralized projects. Make it an explicit goal to maximize multiple-benefit "green infrastructure" projects while still achieving overall objectives. Dispersed, green projects that involve our intensely interested community are the least expensive and most acceptable projects and cause the least harm if they fail.
- 5. The project should not use FEMA data. Use locally collected data and best available science to prioritize the type and location of projects. For example, flooding happens

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throughout watershed, not in three places as stated. The Sonoma Ecology Center collected a detailed archive of the 12/31/2005 flood extent and impacts. This archive, and other similar data, should inform the feasibility phase.

- 6. Use monitoring to track the cumulative results of projects, i.e., track the community's return on investment in terms of ecosystem services. Incorporate the recommendations and approaches in the Ecosystem Services analysis now being proposed to the Moore Foundation by Sonoma County. Karen Gaffney at the county's Open Space District is the lead on this.
- 7. Supporting objectives: well framed. We support leading with groundwater and flooding as key objectives, with the others following closely in importance: water quality, water supply, ecosystem, system resiliency, community benefits, and agricultural and open space (we think these two latter can be combined). Fire protection, proposed at the kick-off meeting, can be part of community benefits.
- 8. In the modeling and scenario-building, the project should incorporate the best, most current estimates of streamflow, peak flows, flood frequencies, droughts, and other consequences of climate change, using the work of Lorrie and Alan Flint at USGS, the David Ackerly lab at UC Berkeley, and others. Scenarios should include those in which summertime water deliveries decline from current levels.

Project input

Submitted projects should be evaluated to estimate their long-term costs and benefits, and then ranked in a transparent fashion. Throughout the watershed:

- 1. Gradually buy title to, or appropriate easements on, a modest number of parcels that are extremely flood prone, or that are at risk of development in key recharge areas. Examine programs in other states and countries to serve as models: some use detention on fields and parking areas, which may be options here.
- 2. Implement runoff source control projects, in uplands, floodplains, and on streambanks: "slow it, spread it, sink it" = "runoff control"
- 3. Enhance and widen riparian areas to increase perviousness, moderate temperatures, and protect channels from unmitigated storm runoff
- 4. Avoid certain approaches such as increasing channel conveyance and underground basins, which usually have fewer long-term benefits.

Localized projects:

1. Upper Kenwood Alluvial Fan Coordinated Landowner Recharge and Flood Reduction Project: Integrates runoff reduction through increased perviousness in



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source areas, retention/detention in mini-marshes throughout fan and former marsh land, multiple-landowner LID and water harvesting installations, timed creek withdrawals and stored-water usage for increased aquatic habitat benefit, coordinated flash-dam use for increased in-stream recharge timed for ecological benefits

- 2. Nathanson Creek and Fryer Creek Watershed Enhancement Projects: Within and upstream of the City, integrate source reduction and water harvesting. Compare costs and benefits of the watershed approach to source reduction with the \$13 million capital program in the City's new storm drain master plan.
- 3. Carriger Creek Alluvial Fan: Coordinated Landowner Recharge and Flood Reduction, as above for Kenwood Fan. As stated in the kick-off meeting, the alluvial fans around the valley provide both flood hazard and opportunity for projects.

Process input

Your team brings excellent talent and experience to this project. In addition to the technical team, we would like to see professional facilitation of the process going forward, to help breakout groups stay on task and questions receive full consideration. We're all close to this issue, posing challenges that we feel a skilled facilitator would help sort through, as seen in the Groundwater Management Plan process. We also ask that projects pass screening through basic program objectives such as habitat enhancement and system resiliency before coming to presentation.

The Sonoma Ecology Center is enthusiastic about continuing in our role as a key partner to help identify, prioritize, develop, fund, implement, and track the impact of projects in Sonoma Valley. We are committed to our mission to continually work toward watershed health, which this program strives toward also. We appreciate the opportunity to participate.

Sincerely,



Richard Dale, Executive Director, Sonoma Ecology Center

cc: Tim Parker, Jay Jasperse, Valerie Brown, Milenka Bates, Toni Bertolero, Mark Bramfitt Leandra Swent